

Appln No. 10/736,751

Preliminary Amendment dated February 21, 2005

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Amendments to the Specification

Please insert the following new paragraph immediately after paragraph [00015]:

[00015.1] Another aspect of the invention relates to a microscope which includes a head portion, including an objective; a base portion having a stage mounted thereto; a C-shaped frame connecting the head portion and base portion; and two curvilinear braces connecting the head portion to the base portion. The braces are employed to reduce vibration and enhance the clarity of the images viewed by the objective. More particularly, in a preferred embodiment of this aspect of the invention, each brace has a resonant frequency that is not a harmonic or sub-harmonic of the fundamental frequency of vibration of the C-shaped frame.

[00015.2] In preferred embodiments, the braces are mounted to the sides of the C-shaped frame so as to enable frontal access to the stage, and each brace is preferably disposed generally parallel to a vertical optical axis of the microscope.

[00015.3] Fine focus of the microscope may be achieved using means for coupling the two braces together and forcing the braces closer together or further apart, thereby adjusting the distance between the objective and the stage. For example, a hydraulic cylinder, a piezoelectric strut or a piezoelectric layer in a strut may be used to couple the braces together and selectively force the braces closer or further apart. Additionally or alternatively, fine focus control can be provided using means for altering the length of the braces. For example, each brace may include a piezoelectric layer therein for altering the length of the brace.

[00015.4] According to another aspect of the invention a method is provided of operating a microscope comprising a head portion having an objective mounted thereto and a base portion having a stage mounted thereto. The method includes attaching at least one brace between the head portion and base portion and

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selectively adjusting the distance between the objective and the stage by varying the length of the brace along a vertical optical axis of the microscope. The length of the brace along the vertical optical axis may be adjusted by expanding or contracting the overall length of the brace. In one embodiment, the brace includes a piezoelectric layer, the thickness of which can be varied by the application of an applied voltage. Additionally or alternatively, the length of the brace along the vertical optical axis may be adjusted by forcing the brace to move in a direction transverse to the vertical optical axis.

[00015.5] In preferred embodiments according to the immediately foregoing aspect of the invention, two braces connect the head portion to the base portion, and the braces are forced to move in a direction transverse to the vertical optical axis by a hydraulic cylinder coupled between the braces or a piezoelectric strut (or a piezoelectric layer in a strut) coupled between the braces.